

1 - Chap

110

15 Jan. 1970

Memorandum for the Record

Subject: Evaluation of [] Proposal STAT
No. 1121-A - A positive to positive
Copying system (Free Radical
Photography)

1. Recommendation: No action be taken.

2. Reasons (General)

A. The system was discovered in 1957 by in-house work at [] why, after 12 years does the reaction mechanism (which they want to study) remain to be elucidated by either in-house or over a million dollars of govt contracts.

B. There is no assurance that a usable system will be available after the reaction mechanism is determined. Although it would be desirable to learn more about the system it is questionable whether the government should support this type of research.

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C. If are so sure that they can make such a material - why not write a set of specifications and a contract - fixed price to develop such a film. If it does not make the specifications they do not get paid. It is doubtful they would accept such terms.

3. Technical Comments.

A. The gelatin system which seems to be the most promising requires heating at 140°C for 5 minutes to develop. This is hardly rapid access.

B. In the gelatin system the NVC is mixed with carbon tetrabromide and suspended in gelatin. It is not clear whether the carbon tetrabromide is free or combined. If it is free it would diffuse out of the film after lowering its speed on the shelf.

C. Carbon tetrabromide fumes are toxic and monitoring systems may be necessary. This is objectionable from the air pollution point of view.

D. The dynamic range appears to be low.

E. Non-silver does not necessarily mean low cost. Highly purified gelatin and dyes are expensive. Solvent coating is also expensive.

F. Shelf-life drops in one day. It would appear that until this problem is solved the system has little practical value.

G. It does not appear that this system has any advantages over dry silver or possibly diazo unless the speeds can be raised.

H. It appears that [] would like to continue (as they have been) working on improving such materials but can do it only at government expense.

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1 - Chief

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